



EXTENSION

College of Agriculture,
Biotechnology & Natural Resources

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CONTAINER GARDENING

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Container plants usually require more attention than those growing in the ground, but their potential advantages may make the extra care worthwhile. For the gardener with little or no garden space, planting in containers is the only way to have a garden. Even those with plenty of garden space can enjoy plants such as seasonal flowers, vegetables, herbs and even small shrubs or trees, grown in containers.

Choosing a Container:

Pots, boxes, baskets or anything that holds soil in which a plant will grow may be used. The function of a container is many fold: hold a plant and its root system together; provide a reservoir for water and nutrients; provide stability for the plant as it gets bigger, and compliment the plant with its color, texture, shape and size.

Materials

Each type of container has its advantage and disadvantages.

Clay or Terra Cotta

Clay or terra cotta containers are attractive but breakable and more easily damaged by freezing and thawing. Clay has salt accumulations over time. Using a tablespoon of white vinegar to each gallon of water helps remove this salt crust easily. Also, sealing with a commercial sealer helps reduce this problem.

Cast Concrete

Cast concrete is long lasting and comes in ranges of styles and sizes. It is easy to make an attractive container with this material. Plain concrete is too heavy.

Plastic and Fiberglass

Plastic and fiberglass are lightweight, relatively inexpensive and available in many sizes and shapes. Purchase sturdy and somewhat flexible pots. Avoid stiff pots because they become brittle with cold and age.

Wood

Wood is natural looking and protects roots from rapid temperature changes. Wooden planters are easy to build. Choose rot-resistant wood and protect it with paint or a preservative.

Metal

Metal is strong but can conduct heat, exposing roots to rapid temperature fluctuations. Metal must be lined with plastic when growing vegetables.



Other Containers

Porous containers such as unglazed clay; terra cotta, and cast concrete tend to dry out more rapidly than most containers. This should be compensated for by adjusting the irrigation schedule.

Drainage

Drainage holes are essential. Without drainage, soil will become waterlogged and plants may die. The holes do not have to be large but there must be enough. If the container has no holes, try drilling some so excess water can drain.

Size

When choosing a container, keep in mind the variety of plant to be grown in it. The size and shape of a plant's root system and its growth rate will determine how large and deep the container must be. Large containers hold more soil, stay moist longer and are less subject to rapid temperature fluctuations. Small hanging plants are especially prone to drying. Light colored containers keep the soil cooler than dark colors.

Shallow containers are easily over-watered and should be checked frequently and watered accordingly. This is a must for bonsai growing in flat containers. Deeper containers drain better and grow plants better with less chance of over or under watering.

Selecting Plants:

It is best to select plants that suit the climate and exposure. Use imagination by combining upright and trailing plants, edibles, and flowers for pleasing colorful effects.

Container gardens can be enjoyed for one season and discarded or designed to last for a number of years.

Some of the better plants for fall planting are: stocks, snapdragons, pansies, violas, dianthus, ornamental kale, ornamental cabbage and even some of the cool season vegetables such as radishes, lettuce and chives.

Some of the more popular plants especially good for spring and summer color are: ageratum, wax begonia (needs shaded area), cockscomb or celosia, coleus (needs shaded area), impatiens (needs shaded area), lobelia, marigold, petunias, verbena, and zinnia. For vegetables, try patio or cherry tomatoes.

Many herbs such as parsley, rosemary and mint grow well in containers.

Perennials that make excellent container plants are: agapanthus, asparagus fern, carnation, chrysanthemum, geranium and marguerite.

Bulbs for containers are amaryllis, canna (dwarf) crocus, daffodil, freesia, hyacinth, iris, ranunculus, scilla and tulips.

Dwarf fruit trees and dwarf shrubs that are planted during the proper time of the year may be grown for short periods in containers. They will need to be moved to a larger container frequently or planted outdoors eventually to keep them healthy and producing.

Preparing Containers for Planting

While the container must have drainage holes, it is not necessary to cover the bottom of the container with gravel because it doesn't improve the drainage. In fact, it actually impedes drainage and makes the soil shallower. Prevent soil from washing out of the drainage holes by placing a piece of screen, or a shard or two, over the holes before adding the soil. Water must flow out, not the soil.

Plain garden soil is too dense for container plantings. Even the best garden soils fail to satisfy container soil requirements. Garden soil in containers does not drain, is poorly aerated and eventually forms a dense mat that roots cannot penetrate easily. Consequently, it stays soggy too long after watering. For these reasons, gardeners growing container plants turn to potting mixes which hold sufficient water and air for good root growth.

Caring for Container Plants:

Watering

All plants in containers need more water than those planted in open ground, where roots can grow down or outward into the soil which is moist. A potted plant is a dependent captive, restricted by the area of the container and demands greater care. Observe your plants and inspect the soil to determine when and how much water they need.

The faster a plant grows, the more water it needs. Expect to water most plants daily on hot days, but do not neglect watering during the winter.

Once the soil in a container dries out completely, the soil shrinks and water naturally takes the course between the dry, shrunken root ball and the sides of the pot. It runs out the drain hole without even penetrating the soil. To bring potted plants into full water capacity so they will take up a water supply evenly, halfway submerge pots in a pail of water until the soil stops bubbling. This indicates that the water has taken the place of air in the soil.

Do not keep the soil constantly soaked. Water thoroughly but allow enough time between waterings for the plant to take up a good portion of the water in the soil. Test the soil by feeling it or lifting the container. If the potting mix feels moist or if the pot is comparatively heavy, there is water in the soil.

Over-watering endangers plans growth. If the soil is waterlogged over a long time, the air will be forced from the soil and the plant will suffocate or drown.

Fertilizing

Container plants need to be fertilized occasionally. A good fertilizer to be used is diluted fish emulsion but there are other good fertilizers that can be used. Start by feeding once every two or three weeks, then adjust the frequency depending on the plant's response and the variety. Excessive fertilizer will accumulate, that is why it is necessary to follow the directions on the label.



A good suggestion is to cut the winter rates of fertilizing in half or stop applications in the winter and resume again in the spring.

Pruning and Training

The main reason for pruning potted plants is to modify their growth to fit the size container. Grown within the confines of a container, a plant seldom takes on the same character as it would if it were set out in the garden and allowed to grow naturally. Therefore, at some time, every potted plant will need pruning of only to keep down its size.

Prune for other important reasons: to increase the yield and quality of flowers and fruits; for a special effect; to give the plant a new shape and character; or to make a miniature out of a bigger plant.

Pest and Disease Control

Since container plants are close at hand, it is easy to keep an eye on them and control attacks by pests or diseases before the condition becomes serious. Occasional hosing with water keeps the plant clean and attractive and helps to discourage build-up of pests, such as aphids and spider mites.

Repotting

After two years most plants are likely to be root-bound and in need of fresh soil. Because feeder roots of container plants tend to mass next to the container wall, most plants become root-bound and stop growing. Actually, the plant is ready when roots are matted on the outside of the root ball.

A day before transplanting, water the plant well. Then, remove the plant from its container. Run an old table knife around the root ball to loosen the damp soil so it will be easy to tip out of the container. Turn the pot upside down, supporting the top of the root ball with your hand. Rap the pot lip sharply on a firm surface to loosen the root ball so it can slide out of the container. A good planting mix is probably the most important element in container gardening. Using a clean container, one size larger than the original, is important.

Before placing the plants in the container, make sure the mix is damp but not wet. If using new clay pots, soak before planting so they will not rob moisture from the soil mix. Check the consistency of the mix. It must be the same throughout the container to allow capillary action to draw the water down to the roots. Fill the container with the soil mix within 1/2" of the top. Water slowly to give the mix a chance to settle, adding more if needed.

For more information:

Master Gardener Help Line

702-257-5555 or 702-222-3130

Extension.unr.edu or

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